

Pennsylvania House of Representatives Education Committee
PUBLIC HEARING ON
Advanced Placement Program®
Wednesday, September 29, 2010
205 Ryan Office Building
Harrisburg, PA
8:30 a.m. to 10:00 a.m.

Testimony by Representatives of The College Board

Catherine Nti, Executive Director K-12 Services, Middle States Region

Marcus S. Lingenfelter, Director of State Government Relations

Good morning Chairman Roebuck, Chairman Clymer, and honorable members of the committee. Thank you for inviting us here today to discuss the Advanced Placement Program and how it has been helping students achieve educational success for more than a half century.

The College Board is a not-for-profit membership association whose mission is to connect students to college success and opportunity. Founded in 1900, the association is composed of more than 5,600 schools, colleges, universities and other educational organizations. Each year, the College Board serves seven million students and their parents, 23,000 high schools, and 3,800 colleges through major programs and services in college admissions, guidance, assessment, financial aid, enrollment, and teaching and learning. The College Board is committed to the principles of excellence and equity, and that commitment is embodied in all of its programs, services, activities and concerns.

The College Board is also very much a presence here in Pennsylvania. Ms. Nti is located in Philadelphia at the Middle States Regional Office which students/families/schools in Delaware, District of Columbia, Maryland, New Jersey, New York, and of course Pennsylvania. Meanwhile, Mr. Lingenfelter is located here in Harrisburg. We stand ready to serve you and your constituents needs at any time.

Introduction

The majority of our programs are centered on what we refer to as the “Pathway to College and Career Readiness (see Appendix A),” which for the College Board begins in middle school and extends through to college admittance. The Pathway includes our Pre-AP curricula in Math and English Language Arts—**SpringBoard**; a collaborative academic and career planning curriculum for students, teachers, and

parents, designed to empower students with the skills and knowledge to envision their goals and achieve success in higher education—**CollegeEd**; a low-stakes, established, valid, reliable and norm-referenced preliminary college preparation assessment instrument for eighth grade students for the purpose of diagnosing the academic strengths and deficiencies of students before entrance into high school—**ReadiStep**; a preliminary college entrance exam cosponsored by the College Board and the National Merit Scholarship Corporation taken annually by more than 3.5 million students to help assess academic skills necessary for college-level work, enter competitions for scholarships, receive recruitment and scholarship information from colleges, and begin their college and career planning efforts—the **Preliminary SAT/National Merit Scholarship Qualifying Test (PSAT/NMSQT)**; a robust offering of more than 30 college-level courses, each culminating in a rigorous exam, AP providing willing and academically prepared students with the opportunity to earn college credit and/or advanced placement—**Advanced Placement Program (AP)**; and finally the original college entrance exam developed to democratize access to college for all students, complementing the continuum of valid, reliable, and nationally norm-referenced College Board assessments provided by Readistep, PSAT/NMSQT, and Advanced Placement, and the best independent, standardized measure of a student's college readiness—the **SAT**.

The emphasis of today's hearing is to discuss, in detail, the Advanced Placement Program commonly referred to simply as "AP®." Established in 1955, AP® enables students to pursue college-level studies while still in high school. Through more than 30 college-level courses, each culminating in a rigorous exam, AP provides willing and academically prepared students with the opportunity to earn college credit and/or advanced placement. Commonly mistaken as an "exclusive" curricular program we contend that "AP is not for the elite, it's for the prepared."

Let us first set out the reasons why AP is important to educational leaders and policy makers. College readiness, college costs, and college completion are three significant education policy issues that the nation and the Commonwealth are grappling. Moreover, the issues surrounding educational disparities between ethnic/racial/socio-economic groups compound these three problems. Fortunately, significant and compelling research on all of these areas demonstrates that AP is a viable and proven policy solution.

AP Program Overview:

A few basics about Advanced Placement: Courses are taught by specially trained high school faculty who must have their syllabus evaluated and approved by the College Board. A uniform end of course examination is administered to students and evaluated by professors from some of the finest colleges and universities in the country. Exam scores are provided on a range of 1 to 5, with 3 commonly being regarded as the minimum threshold for demonstrating collegiate-level work. Those scores are submitted to and accepted by more than 3,600 colleges and universities worldwide for college credit, advanced placement, or both on the basis of the AP Exam grades and the institution's AP credit policies.

More than 122,000 AP Teachers in nearly 15,000 schools worldwide are authorized to teach AP courses. In 2008 alone, 1.5 million students took approximately 2.7 million AP Exams. Those exams were scored by more than 5,000 college and university professors who both develop and score the Exams.

The benefits of Advanced Placement are:

- AP courses establish a college-level standard in secondary schools that is measured through a national assessment designed and scored by college faculty.
- AP courses expose college-bound students to the amounts of homework, study skills, and habits of mind essential for success in college courses.
- AP provides leverage for aligning and strengthening the grades 6-12 curriculum.
- Students who take AP Exams and score a 3 or higher typically experience greater academic success and college graduation rates than non-AP students.
- The AP course is typically the most rigorous curriculum offered in secondary schools and is designated on the student transcript.
- Because AP is widely used for college credit and/or placement, it attracts motivated students eager to double major, or engage in deeper, upper-division courses at college.

Students generally begin taking AP courses during their sophomore or junior years of study. This starting point can vary greatly depending upon the presence of the Pre-AP curriculum – SpringBoard – which begins as early as 6th Grade/Middle School.

College Readiness:

According to research funded by the Bill & Melinda Gates Foundation, approximately 70% of all students in public high schools graduate, but only 32% of all students leave high school qualified to attend four-

year colleges. The prospects are even worse for African American and Hispanic students, with estimates at only 20% and 16% respectively (contrasted to 37% for Caucasian and 38% for Asian American students). Furthermore, recently released results from the 2009-2010 administration of the Preliminary SAT (PSAT/NMSQT) show that Pennsylvania’s Juniors do not meet the minimum standards on the PSAT/NMSQT College Readiness Benchmarks (see chart below and Appendix B for full breakout by gender and ethnicity).

PSAT/NMSQT COLLEGE READINESS BENCHMARKS FOR 11TH-GRADERS				
	Critical Reading	Mathematics	Writing	PSAT/NMSQT Composite*
11th grade PSAT/NMSQT Benchmark	50	50	49	152
Mean of all Pennsylvania Juniors	46.7	47.5	45.6	N/A

*Composite score was computed independently of individual section scores.

With Advanced Placement, students have access to a more rigorous curriculum and learning experience which provides valuable gains beyond the transcript. For example, research among matched student populations (i.e., same GPA and SAT) consistently demonstrates that high school students who earn scores of 3 or better on an AP Exam have developed content knowledge, skills, and habits of mind that result in: (1) higher first-year college GPA; (2) higher performance in sophomore-level college courses; and (3) higher 4-year bachelor’s degree attainment rates. These findings hold true regardless of ethnicity or socioeconomic status.

It is worth noting that the Commonwealth recently adopted the new graduation exams or Keystone exams one means to try and ensure that a high school diploma better corresponds with college readiness. Advanced Placement is included as one of the appropriate substitutes for the Keystone Exams thereby allowing for students to satisfy their graduation exam requirements while simultaneously earning college credit and enhancing their prospects for college admissions.

College Costs:

The College Board's new College Completion Agenda, included with hearing material, ranks Pennsylvania near the bottom for public and private postsecondary tuition pricing (see chart s o pages 127-129). When compared nationally, Pennsylvania ranks 37th for public 2-year and 47th for public 4-year tuition. In practical terms, the cost of a 3 credit hour course at nearby Harrisburg Area Community College is \$348, a Shippensburg University (PASSHE institution) it will cost you \$726. Meanwhile 3 credits at Penn State Harrisburg is \$1,551 and at University Park Campus it costs \$1,803. When compared with those costs the \$87 AP Exam fee represents a significant savings to the student/family. If you consider the additional state and local subsidies suppressing those public institution tuition prices, you can begin to realize how much more cost-effective it is earning college credits via AP Program.

Additionally, research among matched student populations consistently demonstrates that high school students who earn scores of 3 or better on an AP Exam will be much more likely than matched peers to complete their bachelor's degree on time (i.e., four years for a bachelors degree), avoiding tuition for 5th and 6th years of undergraduate study that the majority of US students incurs. Calculating Penn State-University Park's current tuition pricing that eliminates an additional \$31,164 of tuition costs to the student/family (\$15,582 full-time, non-specialized major, upper division tuition pricing). When also considering that at least a third of all colleges and universities in the nation base scholarship decisions in-part on AP participation and/or performance, AP students are more competitive for institutional financial aid and thereby further reducing their costs (and ultimately student debt).

College Completion:

While Advanced Placement is intended to provide enhanced rigor in the high school curriculum it is particular germane to the discussion of college completion and educational attainment. Research has clearly demonstrated that success in Advanced Placement leads to greater success in college including higher graduation rates and decreased time-to-degree. Research from the Texas Higher Education Coordinating Board conducted in 2008 determined that when compared to their peers who didn't take AP (but who have the same SAT rank and same family income levels), AP students completed their bachelor's degree at much higher rates – as much as 67% higher.

Considering the Commonwealth's placement in the educational attainment spectrum nationally (see data below and chart on page 13 of the College Completion Agenda), finding cost-effective ways to ever

increase the ranks of our college educated citizenry to ensure our economic competitiveness and social prosperity is imperative.

Percentage of 25- to 34-Year-Olds with an Associate Degree or Higher (U.S. Census Bureau, 2010)

New York	47.7%	Ranked 5 th
New Jersey	45.9%	Ranked 7 th
Maryland	44.6%	Ranked 10 th
Pennsylvania	42.8%	Ranked 15 th
National Average	41.6%	
Delaware	36.4%	Ranked 25 th

Access to AP:

Despite the extensive research about the benefits of AP as a curricular tool, and the proven results in states like Maryland, Florida, Arkansas, and Texas there still exists wide gaps with regards to access to AP. For example, the College Completion Agenda (see data below and chart on page 60) demonstrates that only a little over a 3rd of public schools in America are offering AP in the Four Core Subject Areas (English language arts, math, social science, and science). Fewer than half of Pennsylvania's public schools have such offerings while our neighboring states of Maryland, New Jersey, and Delaware all rank in the top ten nationally –with Maryland boasting nearly 70%.

Public High Schools Offering Advanced Placement in the Four Core Subject Areas (College Board, 2009)

Maryland	67.3%	Ranked 1 st
New Jersey	60.1%	Ranked 3 rd
Delaware	58.1%	Ranked 7 th
Pennsylvania	43.7%	Ranked 16 th
National Average	33.9%	
New York	33.1%	Ranked 25 th

Our reduced access to courses is demonstrated in fewer Pennsylvania students taking advantage of the AP Program for college readiness, cost effectiveness and college completion. For example, only 18.8% of the Class of 2009 in Pennsylvania took an AP Exam as compared to 26.5% of their peers nationally. In fact, students in our neighboring states all benefited from AP at more significant rates than our students/families including Maryland (40%), New York (36.8%), Delaware (27%) and New Jersey (25.1%).

Not surprisingly, Pennsylvania has a significant untapped reserve of students who are capable of benefiting from AP but are not currently enrolled. In fact, Pennsylvania ranks third in the nation in the amount of students who, according to their performance on PSAT/NMSQT, have the capabilities to score 3 or better on AP Exams. However, with a full 60 school districts in the Commonwealth not offering any AP courses at all and another 60 districts with enrollments of 10 or fewer students it begs the question of how these students/families will be served?

Ethnic/Racial/Socio-Economic Disparities:

The Pennsylvanians who are least being served or enjoying the research-proven benefits of Advanced Placement are African American students. Sadly, Pennsylvania ranks last in the nation for the percentage of African American students who are achieving success in the AP Program. African American students comprised only 6.1% of the AP Examinee population in the Class of 2009 while representing double that as part of the overall student cohort (13.1%). Moreover, African American students in Pennsylvania were only 1.8% of AP examinee population that scored a 3 or better – the worst rate in the nation. Similar results were found for Hispanic and Native America students as well.

AP Teachers:

Arguably, the two most important components of any successful AP Program are students who are both motivated and prepared along with properly trained and inspired AP teachers. Furthermore, having a sufficient supply of qualified AP teachers will be necessary to sustain current levels of AP enrollments as well as any potential expansion efforts. Since it is expected that approximately 60% of AP teachers nation-wide will retire in the next 10 years, the pipeline of future AP teachers must be attended to through proactive steps. Expanding opportunities for teachers to receive AP Professional Development, which also contributes to their Act 48 requirements, is one method. Moreover, I can share with you that key academic leaders at PASSHE are currently contemplating a means by which they can support the expected shortage of AP teachers in the Commonwealth. However, the issue of “access” to professional development must also be taken into consideration on behalf of the many rural districts in Pennsylvania, as Dr. Butler will undoubtedly address in his remarks.

Virtual AP:

The State of Iowa established the Iowa Online Advanced Placement Academy (IOAPA) in June 2001 to permanently improve the statistics on Advanced Placement and to diminish the role of geography in the

equation for opportunity. The IOAPA program components include: (1) online AP course tuition and textbooks; (2) on-site mentors who receive \$200 per semester to support online students; (3) tuition grants for summer AP teacher training institute; and (4) free online AP exam review in 14 subjects. As a result of this program Iowa has overcome barriers to access and equity. Some outcomes of the program include from 2008-2009 include:

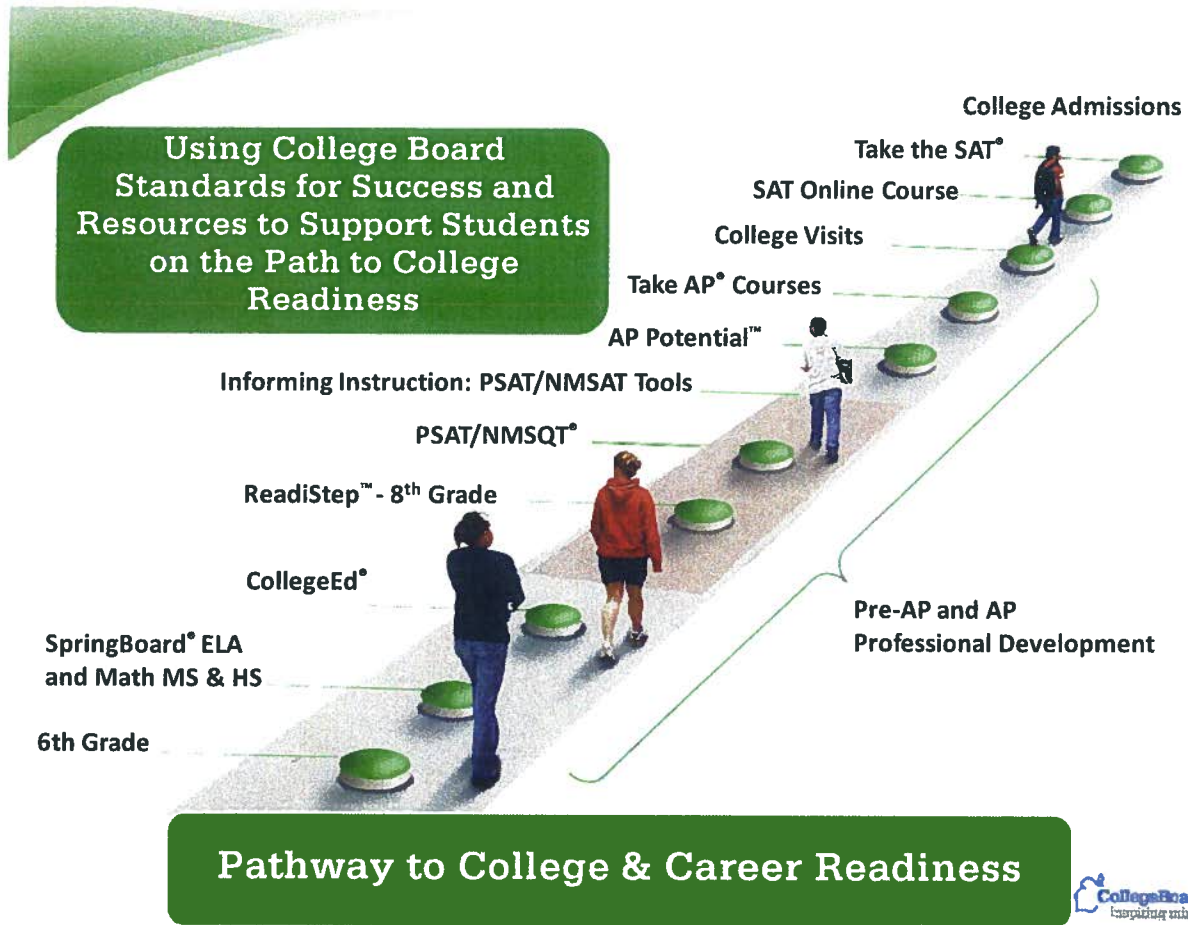
- 95% of IOAPA students completed their online courses
- 91% of online course participants earned a score of 3 or higher
- 343 participating high schools represent all 99 counties in Iowa
- 564 teachers have received AP training

As you no doubt know, the Pennsylvania Virtual High School Study Commission approved the Advanced Placement Program as part of its recommendations.

Conclusion:

The Advanced Placement Program is a time-tested, cost-effective, and research-proven curricular method of increasing academic rigor in high school, improving college readiness, and significantly enhancing potential for success in college completion. States that have made the AP Program a prominent part of their education platform have seen and continue to enjoy the results of their decisions. Our neighbor to the south, Maryland, is a principal example of what can be done in a relatively short period of time by creating a "culture of AP." The College Board, as a non-profit educational partner with the Commonwealth of Pennsylvania for many years, stands ready to assist in making more Pennsylvania students both "college ready" and successful.

Appendix A – College Board Pathway to College & Career Readiness



Appendix B – PSAT/NMSQT Junior Performance and Participation Overview

State Integrated Summary 2009-2010

Pennsylvania - Public Schools



PSAT/NMSQT: Junior Performance and Participation Overview

	Pennsylvania - Public Schools					Total Group - Public Schools				
	# of Test-Takers	% of Total	Mean Critical Reading	Mean Mathematics	Mean Writing	# of Test-Takers	% of Total	Mean Critical Reading	Mean Mathematics	Mean Writing
All										
Total	62,656	100.0%	46.1	47.3	44.8	1,257,229	100.0%	46.2	47.7	45.0
Change from last year	+0.0%		-0.2	-0.6	0.0	-2.9%		+0.2	-0.5	0.0
Gender										
Female	33,993	54.3%	46.0	46.2	45.6	677,967	53.9%	46.2	46.7	45.9
Change from last year	-0.2%		-0.2	-0.4	+0.2	-3.1%		+0.1	-0.4	+0.2
Male	28,409	45.3%	46.2	48.7	44.0	572,656	45.5%	46.2	49.0	44.1
Change from last year	+0.3%		-0.2	-0.9	-0.3	-2.5%		+0.4	-0.7	-0.1
Ethnic Group										
American Indian	220	0.4%	42.7	43.4	41.0	9,117	0.7%	44.2	45.1	42.5
Change from last year	-11.6%		-0.3	-1.1	+0.6	-1.7%		0.0	-0.9	-0.1
Asian	2,716	4.3%	49.2	54.4	48.1	99,080	7.9%	49.6	54.6	48.5
Change from last year	+12.4%		0.0	0.0	+0.2	-0.1%		+0.5	+0.2	0.0
Black	8,860	14.2%	37.4	38.4	36.7	170,453	13.6%	39.2	40.0	38.8
Change from last year	+4.0%		+0.4	0.0	+0.2	-3.9%		+0.6	0.0	+0.3
Hispanic Overall	3,648	5.8%	38.7	39.9	37.7	217,012	17.3%	40.5	42.5	39.8
Change from last year	+22.5%		0.0	-0.2	0.0	+6.3%		+0.4	0.0	-0.4
Mexican American	364	0.6%	42.2	43.4	40.8	97,275	7.7%	40.8	43.1	40.2
Change from last year	+19.3%		-0.6	-0.1	0.0	+7.3%		+0.3	0.0	-0.6
Puerto Rican	1,860	3.0%	36.8	38.0	35.8	19,222	1.5%	40.2	41.1	39.0
Change from last year	+24.9%		-0.1	-0.6	-0.3	+1.0%		+0.3	-0.5	-0.1
Other Hispanic	1,414	2.3%	40.2	41.3	39.3	100,455	8.0%	40.3	42.2	39.5
Change from last year	+20.4%		+0.3	+0.2	+0.4	+6.4%		+0.5	+0.1	-0.3
White	43,673	69.5%	48.8	49.9	47.4	682,389	54.3%	49.6	50.8	48.1
Change from last year	-3.2%		-0.1	-0.5	+0.2	-6.0%		+0.2	-0.6	+0.3
Other	1,680	2.7%	43.4	44.4	42.3	61,744	3.3%	45.5	46.4	44.2
Change from last year	+9.4%		-0.5	-0.7	-0.3	-2.8%		+0.3	-0.4	+0.1
No Response	1,937	3.1%	36.4	37.6	35.6	37,454	3.0%	40.3	41.6	39.3
Change from last year	+3.5%		-0.5	-1.3	-0.7	+7.0%		+0.3	-0.6	-0.3

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The Advanced Placement Program®

Pennsylvania House of Representatives
Education Committee
Harrisburg, PA
September 22, 2010



College Board's Mission and Purpose

- The College Board is a **not-for-profit** membership association whose **mission is to connect students to college success and opportunity**.
- Founded in 1900, the association is **composed of more than 5,600 schools, colleges, universities and other educational organizations**.
- Each year, the College Board serves **seven million students** and their parents, **23,000 high schools**, and **3,800 colleges** through major programs and services in college admissions, guidance, assessment, financial aid, enrollment, and teaching and learning.
- The College Board is **committed to the principles of excellence and equity**, and that commitment is embodied in all of its programs, services, activities and concerns.



Source: <http://www.collegeboard.com/about/index.html>

AP Program Overview



Advanced Placement Overview

- Program established in 1955
- Enables students to pursue **college-level studies** while still in high school
- More than 30 **college-level courses**, each culminating in a **rigorous exam**
- Provides **willing and academically prepared students** with the opportunity to earn college credit and/or advanced placement
- Demonstrates to college admissions officers that students have sought out the most **rigorous curriculum** available to them
- Each AP teacher's syllabus is **evaluated and approved by college faculty** from some of the nation's leading institutions
- Exams developed and scored by **college faculty and experienced AP teachers**
- **Accepted by more than 3,600 colleges and universities worldwide** for college credit, advanced placement, or both on the basis of successful AP Exam grades



Source: <http://www.collegeboard.com/html/aprtv?excmpld=CBF13-ED-1-aprtv>

AP Courses

- Arts
 - Art History, Music Theory, Studio Art (drawing, 2-D, 3-D)
- English
 - Language and Composition, Literature and Composition
- History and Social Sciences
 - Comparative Government and Politics, European History, Human Geography, Macroeconomics, Microeconomics, Psychology, United States Government and Politics, United States History, World History
- Mathematics and Computer Science
 - Calculus AB, Calculus BC, Computer Science A, *Computer Science AB, Statistics
- Sciences
 - Biology, Chemistry, Environmental Science, Physics B, Physics C: Electricity and Magnetism, Physics C: Mechanics
- World Languages
 - Chinese Language and Culture, French Language, *French Literature, German Language, **Italian Language and Culture, Japanese Language and Culture, *Latin Literature, Latin: Vergil, Spanish Language, Spanish Literature

* indicates courses that have been discontinued beginning in the 2009-2010 academic year

** indicates course has been suspended beginning in the 2009-2010 academic year

Source: http://apcentral.collegeboard.com/apc/public/courses/teachers_corner/index.html



Who Participates in AP?

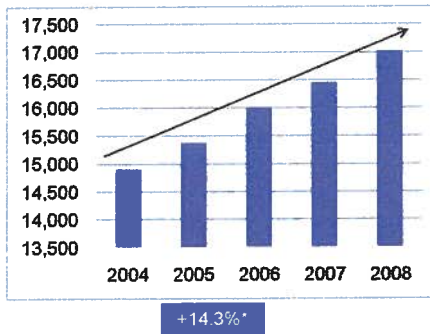
- 17,000+ secondary schools worldwide offer AP Exams
- More than 122,000 AP teachers in nearly 15,000 schools worldwide are authorized to teach AP courses
- In 2008, over 1.5 million students took about 2.7 million exams
- 5,000+ college faculty develop and score the AP Exams ensuring college-level standards
- 3,600+ colleges receive AP Exam grades annually



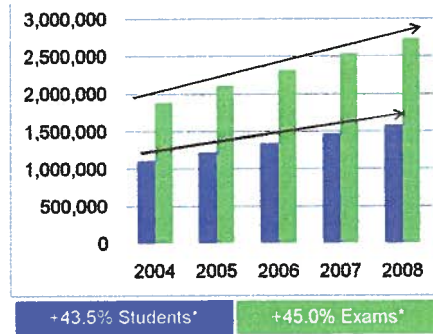
Source: <http://www.collegeboard.com/html/aptrn?examid=CBF13-ED-1-aptrn>

AP Growth: 2004-2008

AP Growth: No. of Schools



AP Growth: Students/Exams



Source: The College Board SDRS
* Represents growth from 2004-2008



Key Benefits of AP

- AP courses establish a college-level standard in secondary schools that is measured through a national assessment designed and scored by college faculty.
- AP courses expose college-bound students to the amounts of homework, study skills, and habits of mind essential for success in college courses.
- AP provides leverage for aligning and strengthening the grades 6-12 curriculum.
- Students who take AP Exams and score a 3 or higher typically experience greater academic success and college graduation rates than non-AP students.
- The AP course is typically the most rigorous curriculum offered in secondary schools and is designated on the student transcript.
- Because AP is widely used for college credit and/or placement, it attracts motivated students eager to double major, or engage in deeper, upper-division courses at college.



Student Preparation and College Success



Concerns about Student Preparation

- Failure of U.S. high schools to produce quality of education competitive with other countries
- Lack of adequate college preparation among high school students
 - Remediation rates
 - Failure to persist
 - Time to degree



U.S. Students Fall Behind in International Comparisons; Raise Concerns for U.S. Competitiveness in Mathematics

Table 5 Range of rank of countries/economies on the mathematics scale

Country	Mathematics score	S.E.	Range of rank			
			OECD countries		All countries/economies	
			Upper rank	Lower rank	Upper rank	Lower rank
Finland	549	14.35	1	2	1	2
Hong Kong, China	547	12.25	1	2	1	2
Japan	545	12.20	1	2	1	2
Netherlands	531	12.25	1	2	2	3
Switzerland	530	12.25	1	2	2	3
Canada	527	12.25	1	2	2	3
U.S.	498	11.37	3	5	7	11
Denmark	498	12.25	3	5	7	11
France	493	12.25	3	5	7	11
Germany	492	12.25	3	5	7	11
Italy	492	12.25	3	5	7	11
Spain	492	12.25	3	5	7	11
U.K.	492	12.25	3	5	7	11
Sweden	492	12.25	3	5	7	11
South Korea	492	12.25	3	5	7	11
China	492	12.25	3	5	7	11
Belgium	492	12.25	3	5	7	11
Portugal	492	12.25	3	5	7	11
Poland	492	12.25	3	5	7	11
U.S. (repeated)	498	11.37	3	5	7	11
... (many more countries)	...	...	...	...	...	...

In 2006, the U.S. ranked 35th out of 57 countries in mathematics



Source: OECD, PISA 2006 database

U.S. Students Fall Behind in International Comparisons; Raise Concerns for U.S. Competitiveness in Science

Table 2 Range of rank of countries/economies on the science scale

Country	Science score	S.E.	Range of rank			
			OECD countries		All countries/economies	
			Upper rank	Lower rank	Upper rank	Lower rank
Finland	563	12.25	1	1	1	1
Hong Kong, China	562	12.25	1	1	1	1
Canada	554	12.25	2	2	2	2
Denmark	553	12.25	2	2	2	2
Japan	551	12.25	2	2	2	2
France	551	12.25	2	2	2	2
Germany	551	12.25	2	2	2	2
Italy	551	12.25	2	2	2	2
Spain	551	12.25	2	2	2	2
U.S.	522	12.25	3	3	3	3
Sweden	522	12.25	3	3	3	3
South Korea	522	12.25	3	3	3	3
China	522	12.25	3	3	3	3
Belgium	522	12.25	3	3	3	3
Portugal	522	12.25	3	3	3	3
Poland	522	12.25	3	3	3	3
U.S. (repeated)	522	12.25	3	3	3	3
... (many more countries)	...	...	...	...	...	...

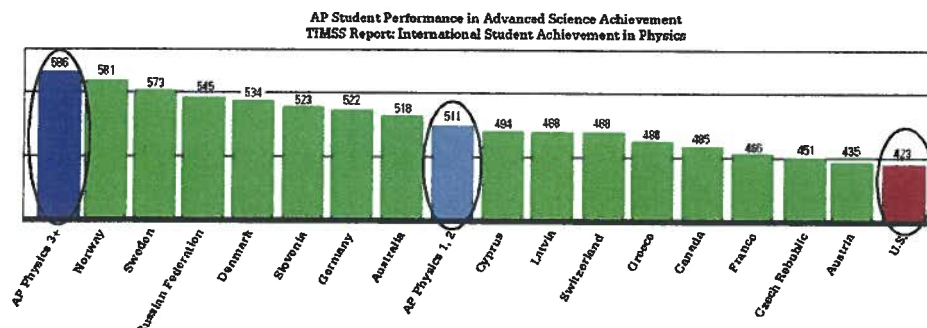
In 2006, the U.S. ranked 29th out of 57 countries in science



Source: OECD, PISA 2006 database

AP Student Performance in Physics

- While the U.S. lags behind industrialized countries that participate in the TIMSS test, AP physics students who earned exam grades of 3 or higher outscore all other students.
- Students who earned a 1 or 2 on AP Physics Exams outscored students in more than half of participating industrialized countries

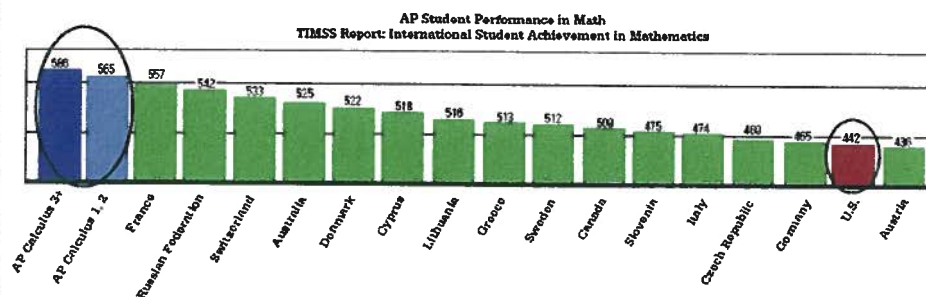


Source: Gonzalez, E., O'Connor, K., & Miles, J. (2000). *How well do Advanced Placement students perform on the TIMSS Advanced Mathematics and Physics Tests?* Chestnut Hill, MA: The International Study Center, Lynch School of Education, Boston College.



AP Student Performance in Math

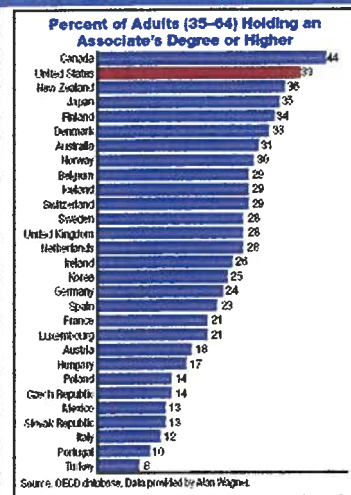
- While the U.S. lags behind nearly every industrialized country that participates in the TIMSS test, AP calculus students, regardless of exam grade, outscore all other students



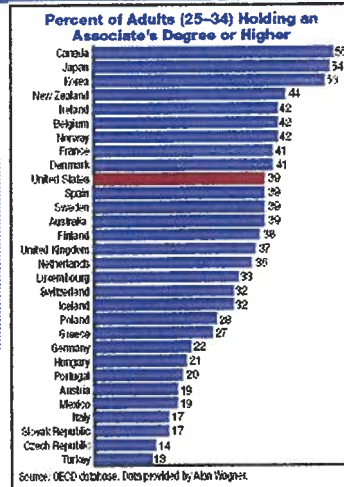
Source: Gonzalez, E., O'Connor, K., & Miles, J. (2000). *How well do Advanced Placement students perform on the TIMSS Advanced Mathematics and Physics Tests?* Chestnut Hill, MA: The International Study Center, Lynch School of Education, Boston College.



Many countries have increased their percentage of college graduates, while the U.S. has flat lined



The U.S. and Germany are the only OECD countries that have not increased the percentage of college graduates



Source: *Measuring Up*, 2008, National Center for Public Policy and Higher Education; OECD, 2003

College Eligible, Not College Ready

Approximately 70% of all students in public high schools graduate, but only 32% of all students leave high school qualified to attend four-year colleges.

College readiness by ethnic group:

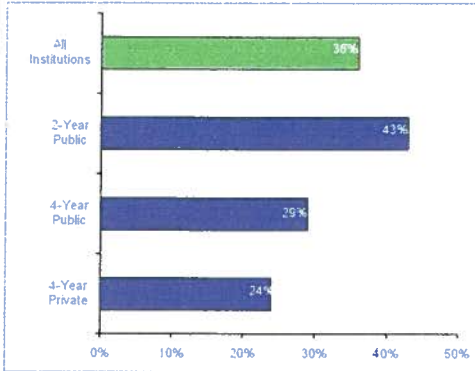
Asian American	38%
White	37%
African American	20%
Hispanic	16%
American Indian	14%

Source: *Public High School Graduation and College Readiness Rates in the United States*, 9/03, Funded: Bill & Melinda Gates Foundation Jay P. Greene, Ph.D.; Greg Forster, Ph.D., Manhattan Institute for Policy Research.

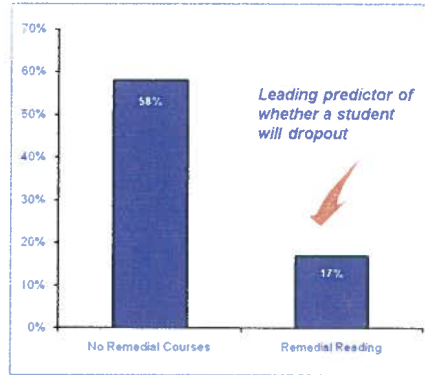


Participation in Remedial Courses

Percentage of First- and Second-Year Students Who Have Taken a Remedial Course Since High School Graduation by Type of Institution, 2003-04



Students earning a bachelor's degree within 8 years, 2004



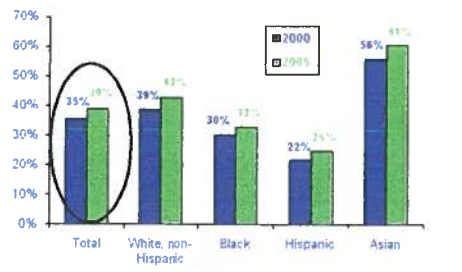
The estimated taxpayer cost of remedial courses is \$1 billion



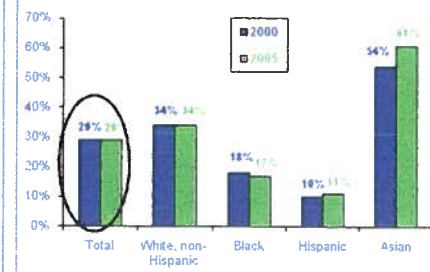
Sources: NPSAS: 2004 Undergraduates; College Board: Trends in College Pricing, 2006; NCES 2004a.

College Enrollment and Completion

College enrollment as a percent of all 18-24 year-olds by ethnicity, 2000 and 2005



Percent of 25-29 year-olds who have completed a Bachelor's degree by ethnicity, 2000 and 2005



Black and Hispanic students continue to lag far behind White and Asian students in both college enrollment and college completion



Source: U.S. Census Bureau, CPS 2000 and 2005

AP Participation and Likelihood of College Graduation

College Graduation Rate differences between "matched" AP and non-AP students*

Student Demographic	AP Exam Grade of 3 or higher
African-American	28% higher
Hispanic	28% higher
White	33% higher
Low-Income	26% higher
Not Low-Income	34% higher

*Matched students are those who have similar family backgrounds and standardized test scores

Source: Dougherty, Mellor & Jian, 2006



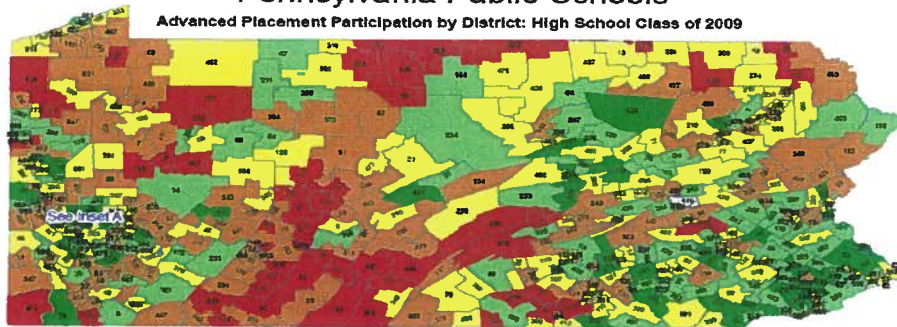
Pennsylvania AP Participation & Performance



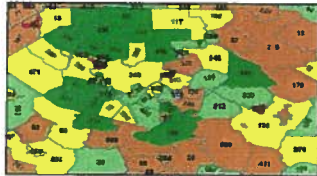
2009 AP Participation in Pennsylvania is above 30% in Philadelphia and Pittsburgh suburb schools. Areas closest to the cities have pockets of high participation. The rural areas, in central PA, have low participation.

Pennsylvania Public Schools

Advanced Placement Participation by District: High School Class of 2009



Inset A



Sources: 2007-2008 NCES 12th grade district enrollment, 2008-2009 College Board Advanced Placement Cohort Data and 2007-2008 School District Boundary Files (purchased from Proximity). AP Cohort data represents all public school students from a given year's public high school class who took an AP exam at any point in high school.

Notes: The most recent NCES enrollment data available at the time of map production was for the 2007-2008 school year. A degree of caution should be exercised when reviewing participation numbers as they may not reflect accurate district enrollments for the 2008-2009 school year.

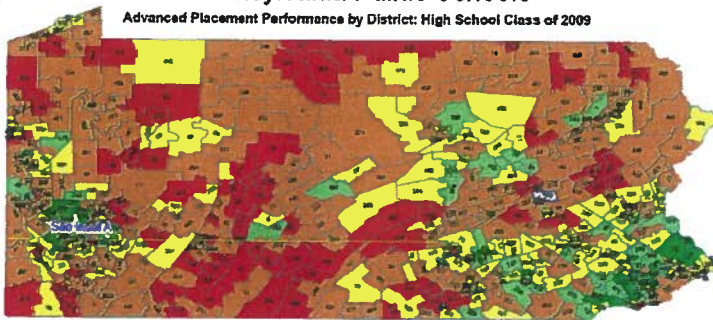
Percent of graduating class participating in AP during high school

- Less than 1%
- 1% - 9%
- 10% - 15%
- 20% - 29%
- 30% or greater
- No 12th grade enrollment data

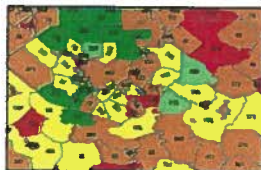
In terms of students of students earning 3 or higher in at least one AP exam, the districts are largely concentrated in three areas in Pennsylvania.

Pennsylvania Public Schools

Advanced Placement Performance by District: High School Class of 2009



Inset A



Sources: 2007-2008 NCES 12th grade district enrollment, 2008-2009 College Board Advanced Placement Cohort Data and 2007-2008 School District Boundary Files (purchased from Proximity). AP Cohort data represents all public school students from a given year's public high school class who took an AP exam at any point in high school.

Notes: The most recent NCES enrollment data available at the time of map production was for the 2007-2008 school year. A degree of caution should be exercised when reviewing participation numbers as they may not reflect accurate district enrollments for the 2008-2009 school year.

Percent of graduating class earning a 3 or higher on at least one AP exam during high school

- Less than 1%
- 1% - 9%
- 10% - 15%
- 20% - 29%
- 30% or greater
- No 12th grade enrollment data

Of the 36 schools offering the most AP courses, the % of students receiving 3+ >50% of the national average is 55% of those schools.

There are multiple schools where the % of students receiving 3+ is < 50% of the national average at both high and low participation schools suggesting possible lack of a rigorous curriculum or proper preparation before taking AP



2010 AP Report to the Nation – PA

- 18.8% of the graduating class of 2009 took at least one AP exam during high school. This compares to 26.5% for the nation.
- 12.3% of the graduating class of 2009 earned a 3 or higher on one or more AP exams in high school. This compares with 15.9% for the nation.
- New research from Dr. William Sanders reflects that 8th grade PA students who score proficient or advanced on the PSSA exam have an 83% probability of scoring a 3 or better on the AP Calculus exam.
- 70% percent of students now entering 9th grade in PA are scoring proficient or advanced on the PSSA. Based on these findings these students have the potential to be successful in AP classes.
- AP exams may be substituted to meet the new Keystone graduation exam requirements. (AP English Lit, AP Biology, AP Calculus and AP US History)

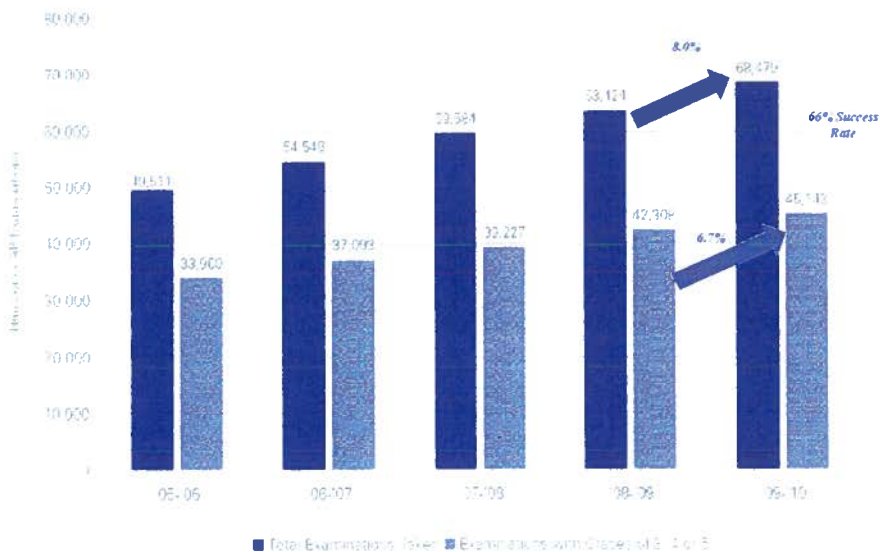


State Integrated Summary 2009-2010

Pennsylvania - Public Schools



AP: Number of Examinations and Number of Examinations with Grades of 3, 4 or 5



AP: Performance and Participation Overview

	Pennsylvania - Public Schools				Total Group - Public Schools			
	# of Test-Takers	% of Total	# of Exams Taken	# of Exams 3+	# of Test-Takers	% of Total	# of Exams Taken	# of Grades 3+
All	21,423	100.0%	98,479	45,142	1,665,676	100.0%	2,757,427	1,650,848
Change from last year	+6.1%	+5.0%	+5.0%	+6.7%	+0.5%	+10.2%	+8.3%	+8.3%
Gender								
Female	22,814	55.1%	36,441	20,678	990,003	59.5%	1,518,667	799,469
Change from last year	+8.1%	+5.1%	+5.1%	+7.2%	+0.2%	+9.9%	+8.4%	+8.4%
Male	19,009	44.9%	32,038	24,465	696,673	40.5%	1,238,760	731,379
Change from last year	+5.7%	+7.5%	+5.2%	+6.2%	+0.9%	+10.6%	+8.2%	+8.2%
Ethnic Group								
American Indian	71	0.3%	105	71	3,148	0.5%	12,680	6,571
Change from last year	+10.1%	+11.5%	+11.5%	+13.5%	+6.0%	+9.0%	+8.9%	+8.9%
Asian	3,400	8.3%	7,092	3,050	134,888	11.7%	361,724	250,960
Change from last year	+10.6%	+13.3%	+13.3%	+16.3%	+8.5%	+9.3%	+8.6%	+8.6%
Black	2,696	6.6%	3,070	760	129,602	6.2%	167,450	49,100
Change from last year	+24.2%	+23.7%	+23.7%	+25.8%	+13.9%	+14.4%	+12.5%	+12.5%
Hispanic Overall	1,280	3.1%	1,525	321	282,070	16.9%	406,066	165,566
Change from last year	+15.6%	+17.1%	+17.1%	+18.9%	+15.8%	+15.8%	+13.6%	+13.6%
Mexican American	180	0.4%	278	109	123,898	7.9%	200,110	79,641
Change from last year	+23.2%	+23.1%	+23.1%	+23.3%	+15.1%	+15.1%	+13.9%	+13.9%
Porto Rican	487	1.1%	674	216	15,275	1.0%	23,799	9,609
Change from last year	+19.1%	+17.1%	+17.1%	+18.5%	+20.1%	+19.1%	+18.9%	+18.9%
Other Hispanic	617	1.6%	563	544	113,129	7.1%	182,157	76,405
Change from last year	+11.4%	+5.0%	+5.0%	+5.0%	+14.6%	+15.3%	+13.1%	+13.1%
White	31,702	70.5%	51,796	36,138	696,777	56.7%	1,942,964	962,963
Change from last year	+2.7%	+1.2%	+1.2%	+1.5%	+6.3%	+9.1%	+4.4%	+4.4%
Other	1,004	2.4%	1,739	1,064	62,464	3.3%	91,812	49,628
Change from last year	+8.0%	+5.2%	+5.0%	+5.3%	+5.3%	+1.6%	+2.1%	+2.1%
No Response	1,111	2.7%	1,670	1,147	56,530	3.7%	108,579	57,066
Change from last year	+20.6%	+19.5%	+19.9%	+19.7%	+13.7%	+15.5%	+11.6%	+11.6%

Note: Scores are reported when there are five or more exams taken by five or more test-takers.

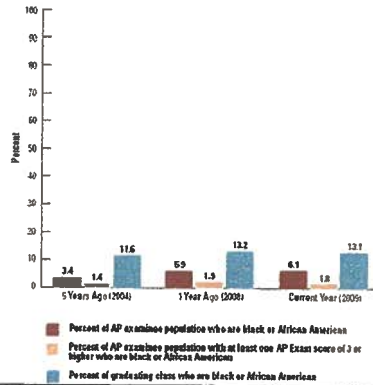
AP Participation Black or African American Students

AP Participation and Performance

Black or African American Students

- 1,501 black or African American students from the graduating class of 2009 took at least one AP Exam during high school compared to 1,395 in the class of 2008 and 618 in the class of 2004.
- 282 black or African American students from the graduating class of 2009 earned a 3 or higher on at least one AP Exam during high school compared to 299 in the class of 2008 and 178 in the class of 2004.

Black or African American Students' AP Participation and Performance in Pennsylvania 2004-2009

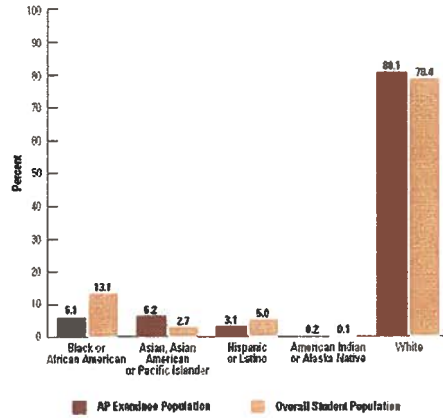


2009 AP Performance and Participation

Pennsylvania Public Schools: High School Class of 2009

Access to AP[®] by Race/Ethnicity

Race/Ethnicity of AP[®] Examinees vs. High School Seniors in Pennsylvania



PA ranks 51st (out of 51 states & DC) in African-American AP student participation & performance

Table 1. AP Equity and Excellence Gaps

Student Access and Performance in U.S. Public Schools by Race/Ethnicity

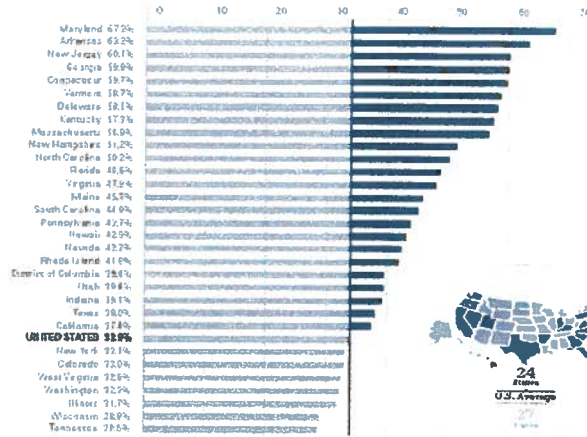
State	...who are black/African American		Equity and Excellence Gap Eliminated	...who are Hispanic/Latino		Equity and Excellence Gap Eliminated	...who are American Indian/Alaska Native		Equity and Excellence Gap Eliminated
	% of Graduating Class ^a	% of Successful AP Exam Population		% of Graduating Class ^a	% of Successful AP Exam Population		% of Graduating Class ^a	% of Successful AP Exam Population	
Alabama	32.3	7.6		1.9	2.5	✓	1.0	0.3	
Alaska	4.1	2.1		2.8	4.1	✓	20.5	4.1	
Arizona	5.6	1.9		32.3	21.3		5.9	0.3	
Arkansas	21.3	3.7		6.0	6.2	✓	0.9	1.0	✓
Pennsylvania	13.1	1.8		5.0	2.7		0.1	0.2	✓



% of Public High Schools Offering AP in Four Core Subject Areas

Percentage of Public High Schools Offering Advanced Placement (AP) in the Four Core Subject Areas, 2009

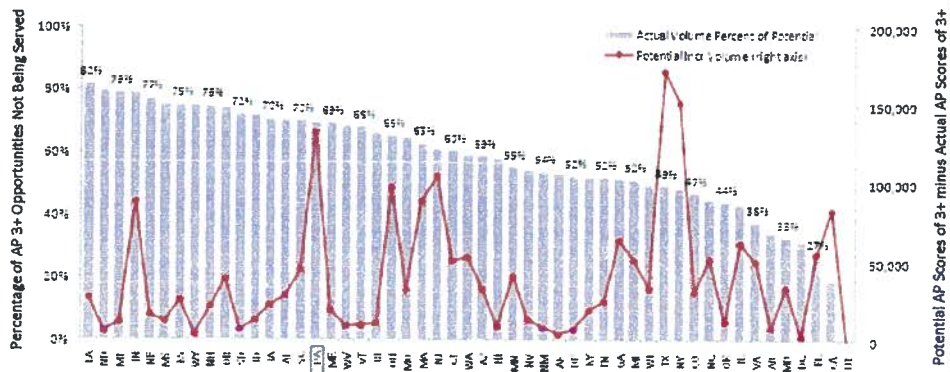
Source: The College Board and International Baccalaureate, 2009



Source: College Completion Agenda

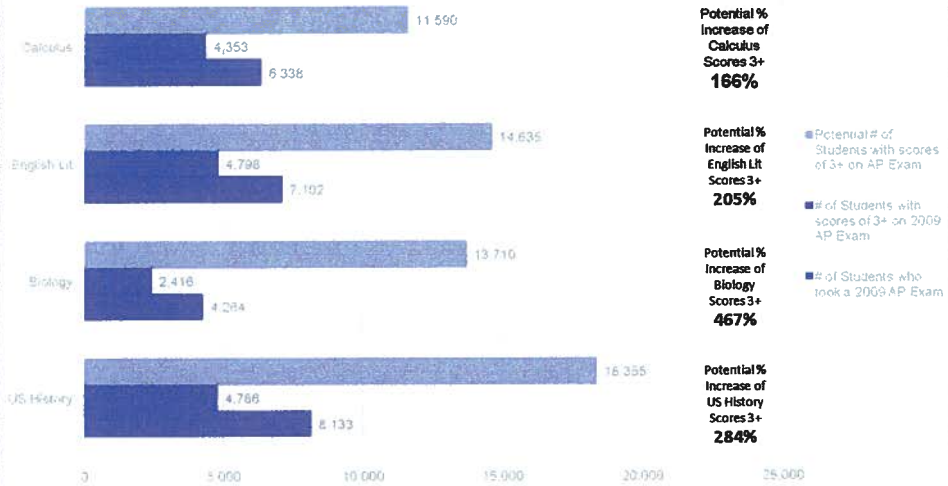


Pennsylvania ranks #3 in the nation in the amount of untapped potential for students to score 3 or better on AP Exams



PA's Tremendous AP Student Potential

2009 PA AP Test Takers, Students w/ Scores 3+, Potential Students w/Scores 3+*



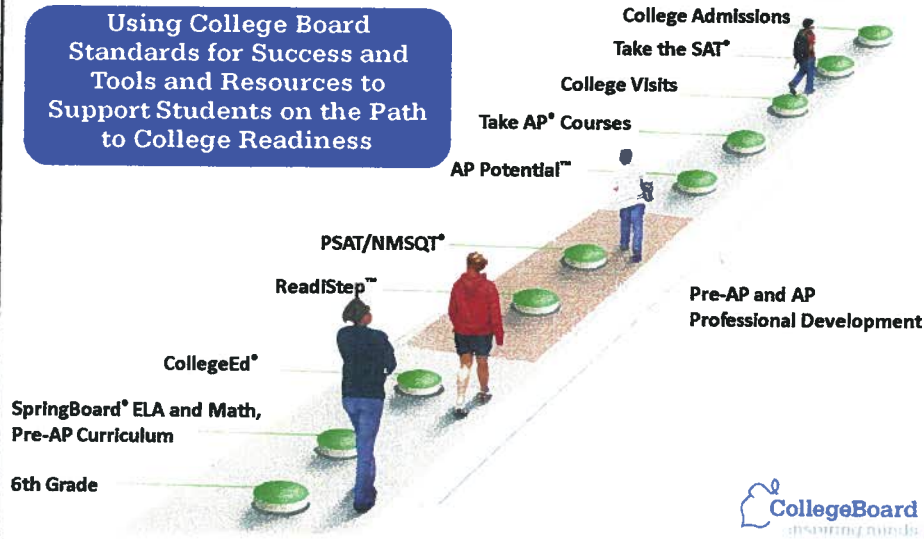
*Possible # of Students with scores of 3+ on AP Exam are based on PSAT/NMSQT results using CollegeBoard's AP Potential Tool. 08-09 Pennsylvania Enrollment by Grade (from Michele Heister @ Div. of Data Services): 9th-154,468 — 10th-150,440 — 11th-141,732 — 12th-140,022

College & Career Readiness Pathway



Pathway to College & Career Readiness

Using College Board Standards for Success and Tools and Resources to Support Students on the Path to College Readiness



SpringBoard: The Official Pre-AP Program

- ELA and Mathematics curriculum aligned with College Board Standards for College Success
- Enables students to build the skills and understanding they need for success in AP courses and college-level work without remediation
- Provides rigorous English and mathematics lessons for all students in grades 6-12



AP and College Success

- Research continues to suggest that AP Exam grades of 3 or higher are consistently predictive of student college success
- Emphasis should be on strong partnerships between K-12, higher education, states and College Board to help more students earn grades of 3 or higher
- College Board believes that willing and academically prepared students should be encouraged and supported in taking on the challenge of college-level courses in high school
- Students **may** experience college success regardless of exam grade



AP Access and Equity

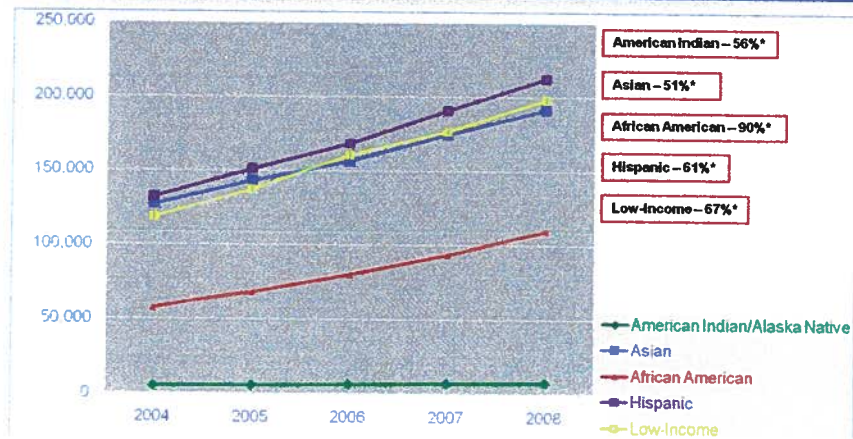


Guidelines: Access to AP

- AP courses should be open to all willing and academically prepared students
- Schools should work to eliminate barriers due to race, ethnicity, and socioeconomic status
- Schools should make efforts to ensure that AP classes reflect the diversity of their student population



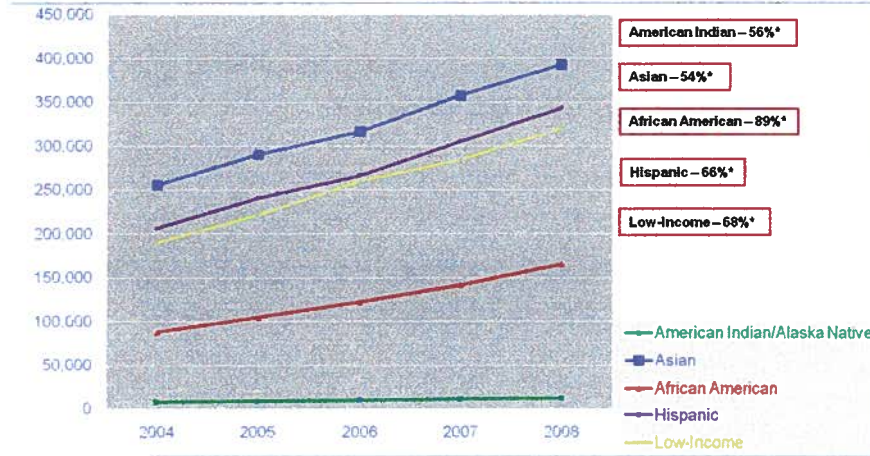
Growth in AP Participation Among Minority and Low-Income Students: 2004-2008



Source: The College Board SDRS
*Percentages listed represent growth from 2004-2008



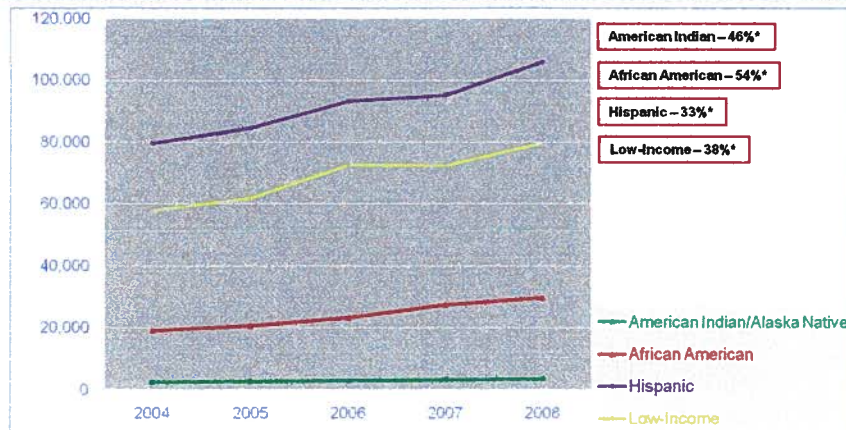
Growth in Exams Among Minority and Low-Income Students: 2004-2008



Source: The College Board SDRS
*Percentages listed represent growth from 2004-2008



Growth in Exam Grades of 3 and Higher Among Underrepresented Students: 2004-2008

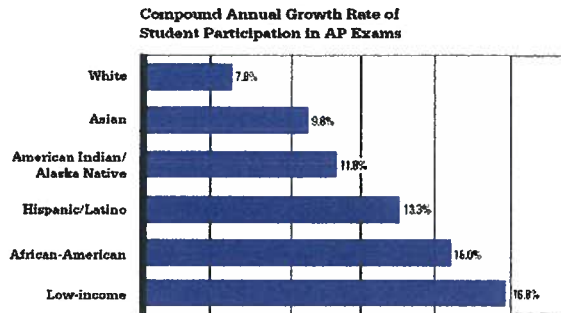


Source: SDRS 2004-2008
*Percentages listed represent growth from 2004-2008



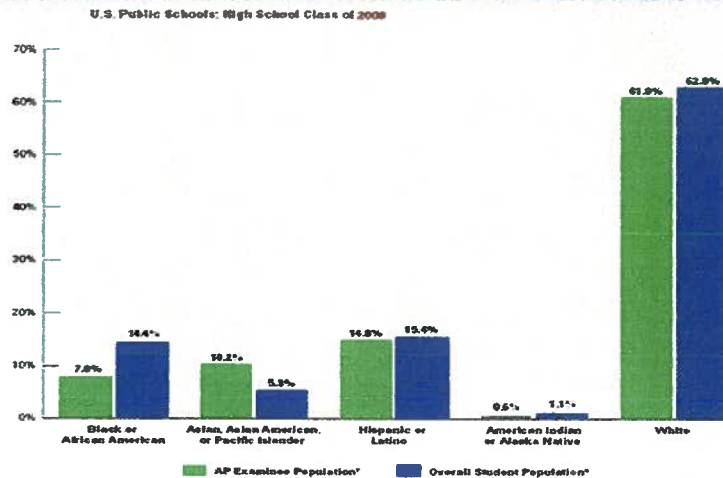
Greater Access to AP Among Traditionally Underrepresented Groups

- Participation among low-income students has grown at the highest rate compared with other students
- African-American students are the fastest growing minority group participating in AP



Source: College Board SDRS, 2002-2007

African American, Hispanic, and American Indian Students are Still Underrepresented in AP



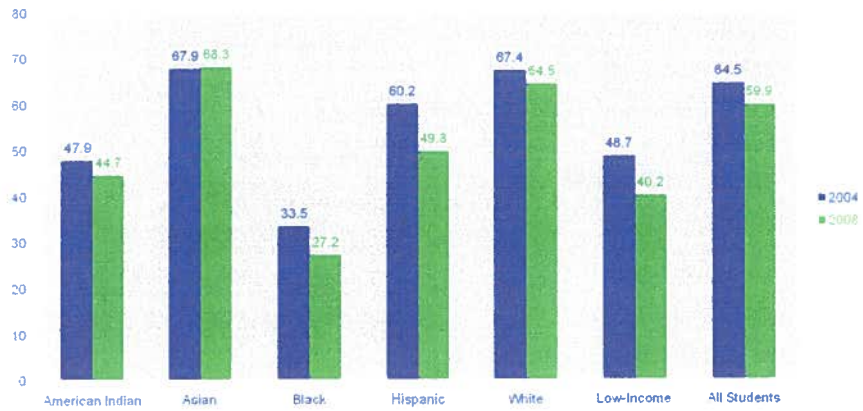
*These estimates include all public school students in the class of 2008 who took an AP Exam at any point in high school. Because some AP Exam takers identify themselves as "Other" for ethnicity or do not provide ethnicity, the "AP Exam takers Population" in this figure only represents 94.4 percent of the AP population.

**"Knowledge at the College Door" (2008). Western Interstate Commission for Higher Education.

Source: AP Report to the Nation

Disparities in Exam Grades Persist

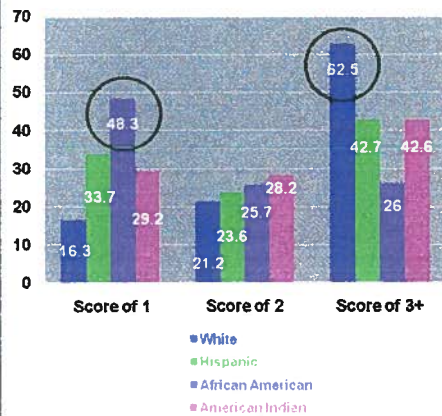
Percentage of Students Earning AP Exam Grades of 3 or higher



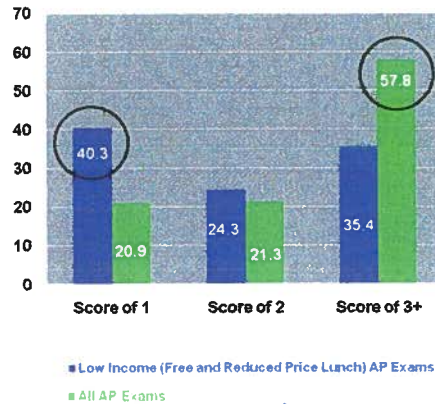
Source: SDRS 2004 and 2008 data

Achievement Gaps Persist

Exams Scored 1, 2, or 3+:
Ethnic / Racial Category



Exams Scored 1, 2, or 3+:
All Exams and Low Income
(Free and Reduced Price Lunch) Exams



Source: SDRS 2008 data

Despite AP's Growth, Participation in AP is Limited, Even Among College-Bound Students

- While about 69% of U.S. high school graduates are entering college¹, only one-fourth (25%) took an AP Exam during their high school years²
- And within the fraction of students who took AP:
 - Over 80 percent took just 1, 2 or 3 AP Exams during their entire 4 years of high school
 - Less than 5 percent took 7 or more AP Exams during their entire 4 years of high school³

¹ Source: U.S. Department of Education, National Center for Education Statistics (2007). *The Condition of Education 2007* (NCES 2007-064).

² Source: AP Report to the Nation 2009

³ Source: College Board SDRS



Sources

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- *AP Report to the Nation 2009*
- *College Board Staff Data Resource Software (SDRS)*
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- *National Center for Public Policy and Higher Education: <http://www.highereducation.org/>*
- *National Postsecondary Student Aid Study (NPSAS): 2004 Undergraduates*
- *Organisation for Economic Co-Operation and Development (OECD) 2003*
- *Programme for International Student Assessment (PISA) 2006 database*
- *U.S. Census Bureau, CPS 2000 and 2005*
- *U.S. Department of Education, National Center for Education Statistics (2007). The Condition of Education 2007 (NCES 2007-064)*

